

Generating Automatic Hip and Gable Roofs

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The information in this article applies to:



QUESTION

How do I build hip and gable roofs automatically?

ANSWER

The automatic roof utility in Chief Architect allows you to create a wide variety of roof designs using the Build Roof dialog and the roof directives that you can set in the Wall Specification dialogs for each exterior wall in your plan.

This tutorial will cover building an automatic hip, an automatic gable roof, an automatic dutch gable, changing the pitch of a roof plane above a wall, and how to adjust the ceiling height of a room.

- [Automatic Hip Roof](#)
- [Automatic Gable Roof](#)
- [Automatic Dutch Gable Roof](#)
- [Controlling Roof Height](#)

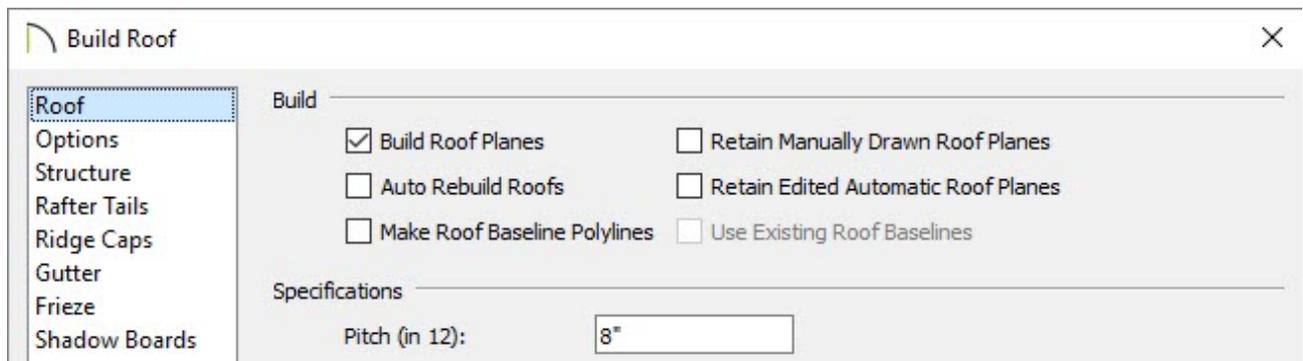
An automatic hip roof is the easiest type of roof to create in Chief Architect, because the program will generate a roof plane on each exterior wall in your plan by default, resulting in a hip condition.

To create an automatic hip roof

1. Select **Build> Wall> Straight Exterior Wall**  from the menu, then click and drag four walls to form a basic rectangular structure.

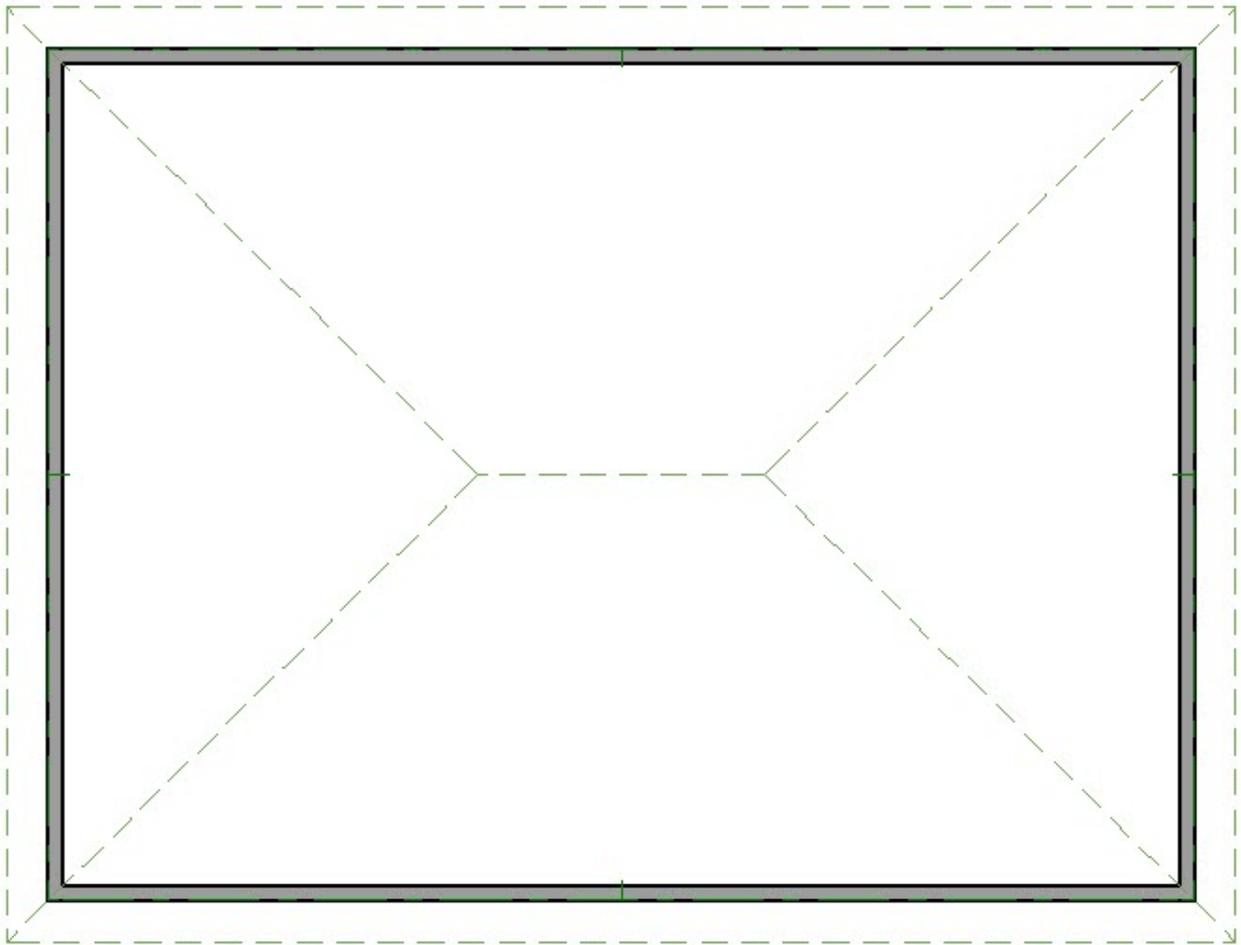
◦ In this example, a 30' x 40' structure is created.

2. Select **Build> Roof> Build Roof**  from the menu to display the **Build Roof** dialog:

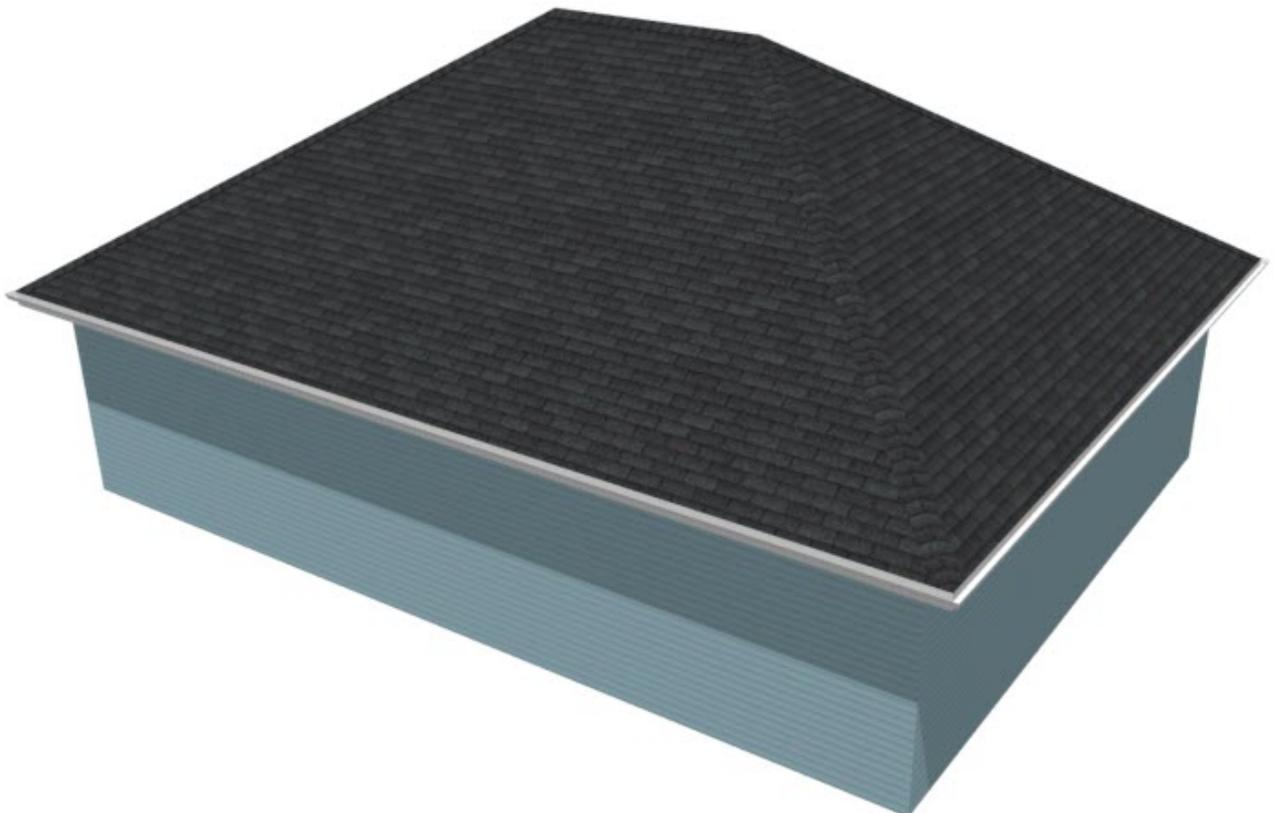


Note: The Auto Rebuild Roofs option directs the program to rebuild the roof any time a change is made to the plan that will affect the roof. This option is useful for this exercise, but is not completely necessary.

- Check the box beside **Build Roof Planes**.
- Make note of the **Pitch** and adjust as necessary; all automatically generated roof planes will be made using the pitch specified.
- Click **OK** to close the dialog and generate an automatic hip roof.



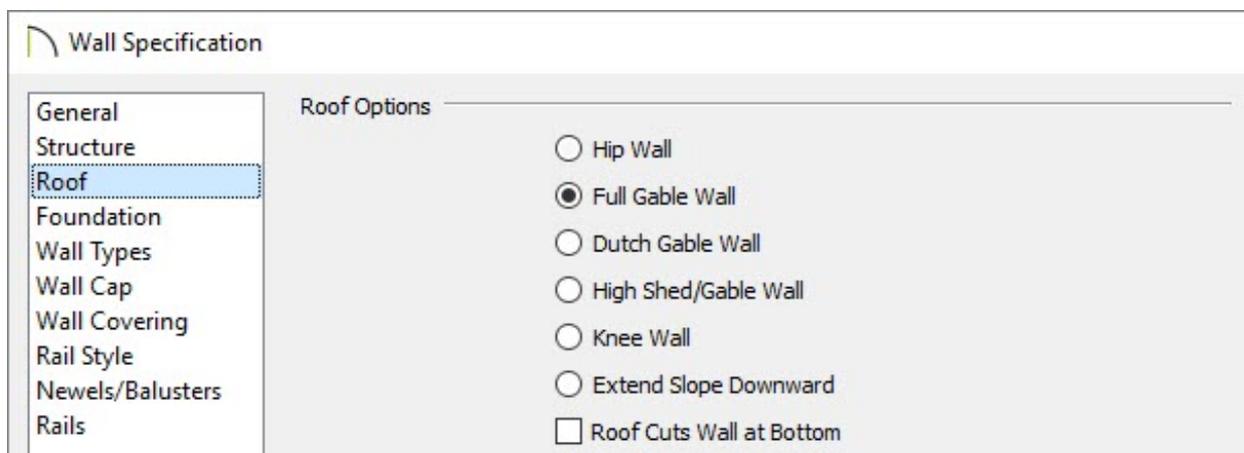
3. Select **3D> Create Perspective View> Perspective Full Overview**  from the menu to see the results.



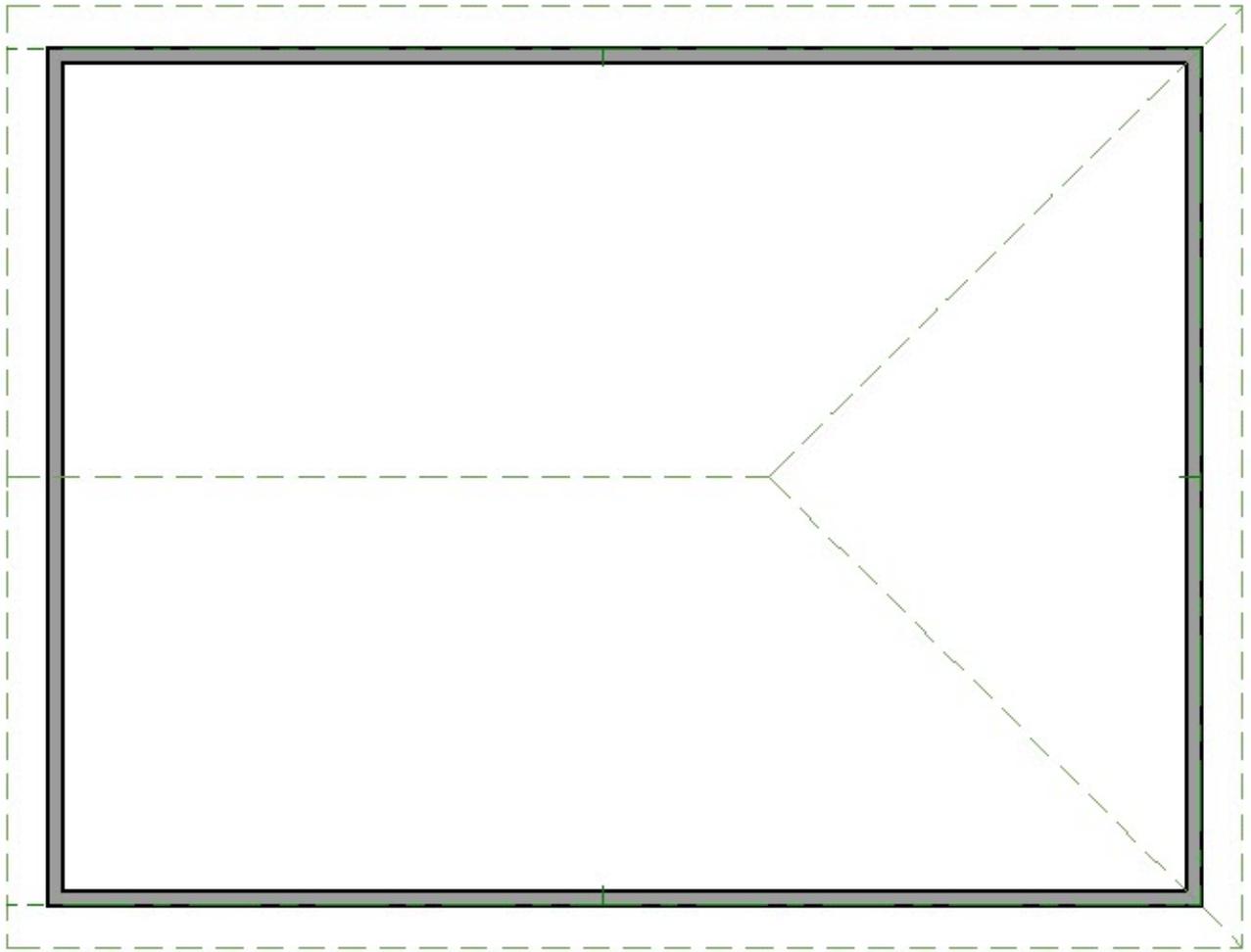
If a gable is needed above a particular wall instead of a hip roof plane, this can be set in the Wall Specification dialog of the wall in question.

To create an automatic gable roof

1. In Floor Plan view, click on a wall that you would like to form a gable over to select it, then click on the **Open Object**  edit button.
2. On the **Roof** panel of the **Wall Specification** dialog, select the **Full Gable Wall** option, then click **OK** to close the dialog and apply the change.



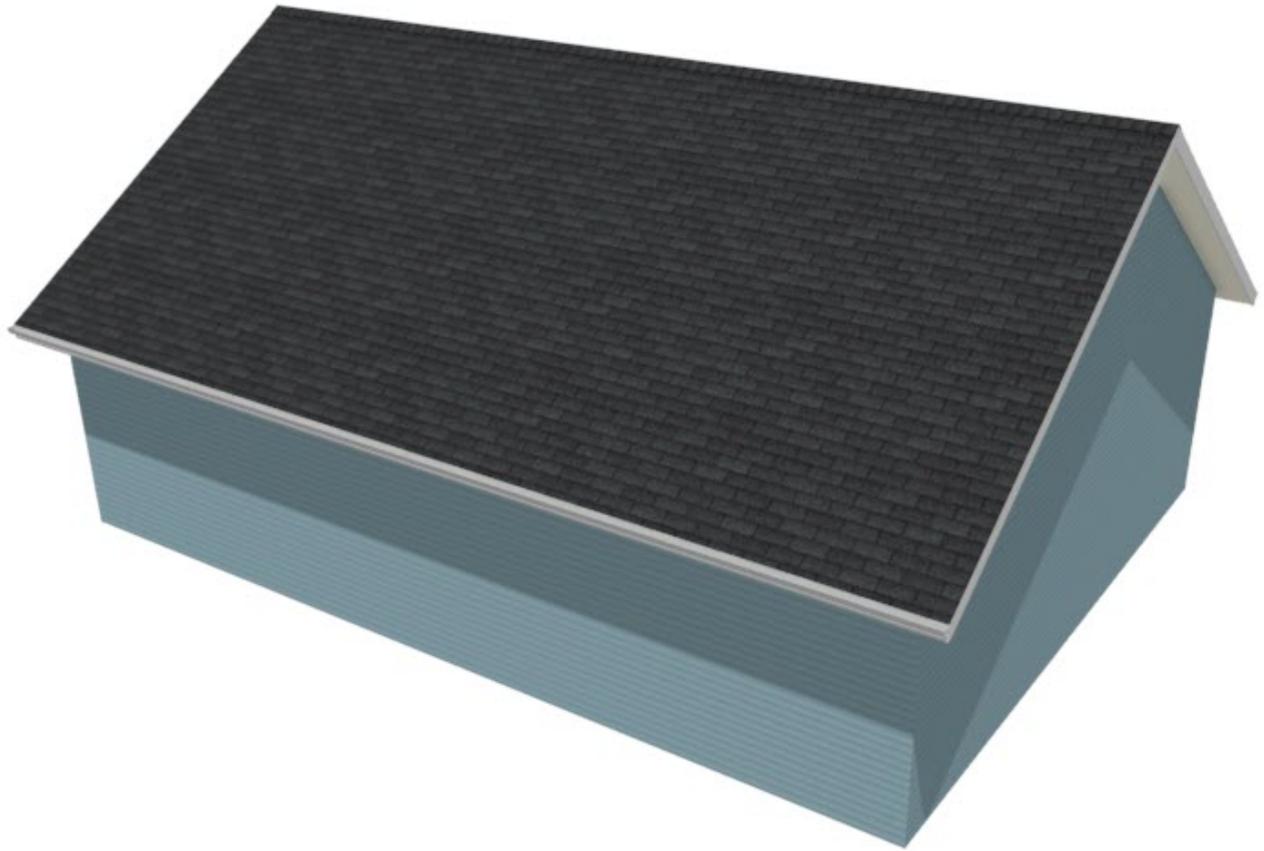
3. If **Auto Rebuild Roofs** is enabled, the roof will automatically update to reflect this change. If Auto Rebuild Roofs is not enabled, select **Build> Roof> Build Roof**  from the menu, check the box beside **Build Roof Planes**, and click **OK** to rebuild the roof.



4. Click on the wall opposite the new Full Gable Wall and repeat steps 1 and 2 above.



5. Select **3D> Create Perspective View> Perspective Full Overview**  from the menu to see the results.



In Chief Architect X10 and newer program versions, dutch gable roofs can be generated automatically.

To create an automatic dutch gable roof

1. Click to select the wall over which you would like a dutch gable, then click the **Open Object**  edit button.
2. On the **Roof** panel of the **Wall Specification** dialog, select the **Dutch Gable Wall** option, specify the **Pitch** leading up to the dutch gable as well as either the **Starts at Height** or **In From Baseline** value for where the dutch gable will start, and then click **OK** to close the dialog and apply the change.

Wall Specification

General
Structure
Roof
Foundation
Wall Types
Wall Cap
Wall Covering
Rail Style
Newels/Balusters
Rails
Layer
Materials
Label

Roof Options

Hip Wall
 Full Gable Wall
 Dutch Gable Wall
 High Shed/Gable Wall
 Knee Wall
 Extend Slope Downward
 Roof Cuts Wall at Bottom

Pitch Options

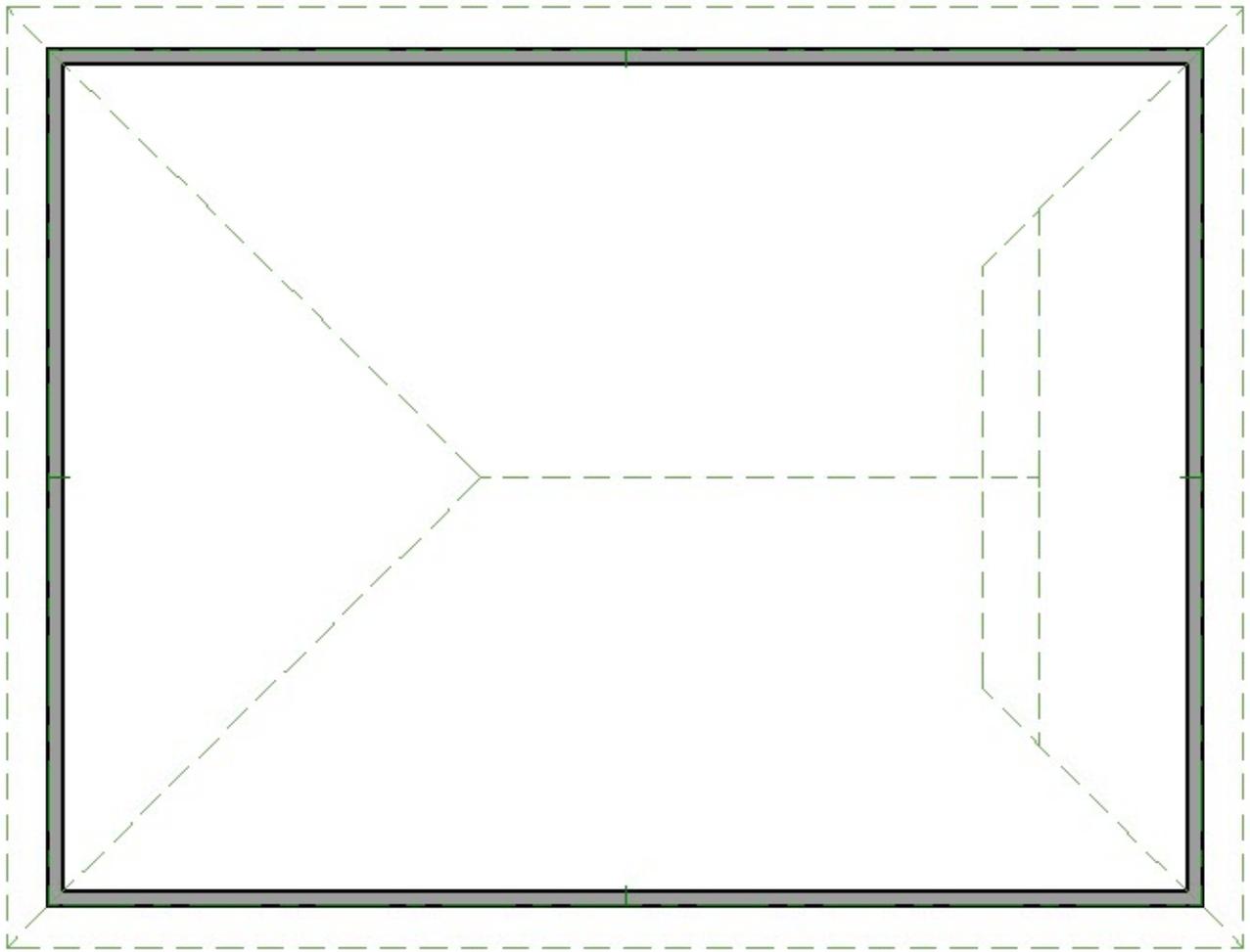
Pitch: in 12
 Upper Pitch

Upper Pitch: in 12

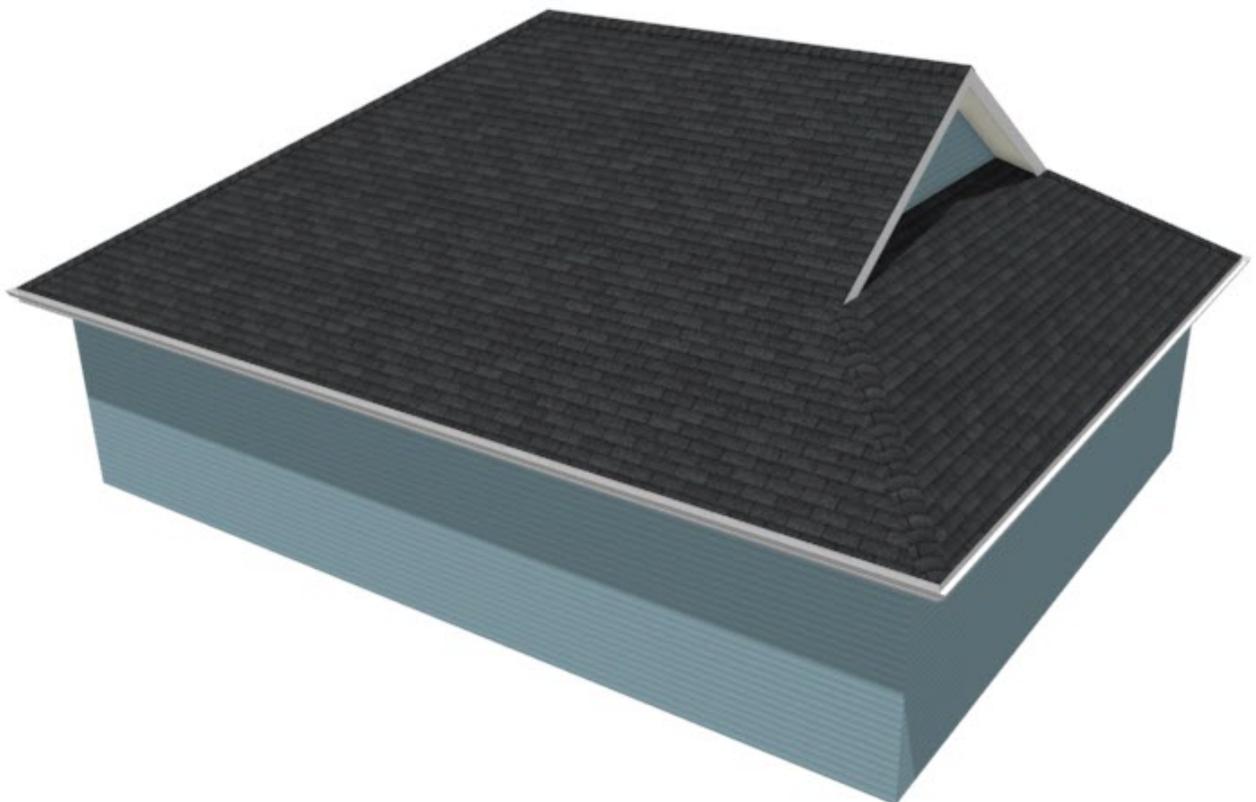
Starts at Height:

In from Baseline:

3. If **Auto Rebuild Roofs** is enabled, the roof will automatically update to reflect this change. If Auto Rebuild Roofs is not enabled, select **Build> Roof> Build Roof**  from the menu, check the box beside **Build Roof Planes**, and click **OK** to rebuild the roof.



4. Select **3D> Create Perspective View> Perspective Full Overview**  from the menu to see the results.



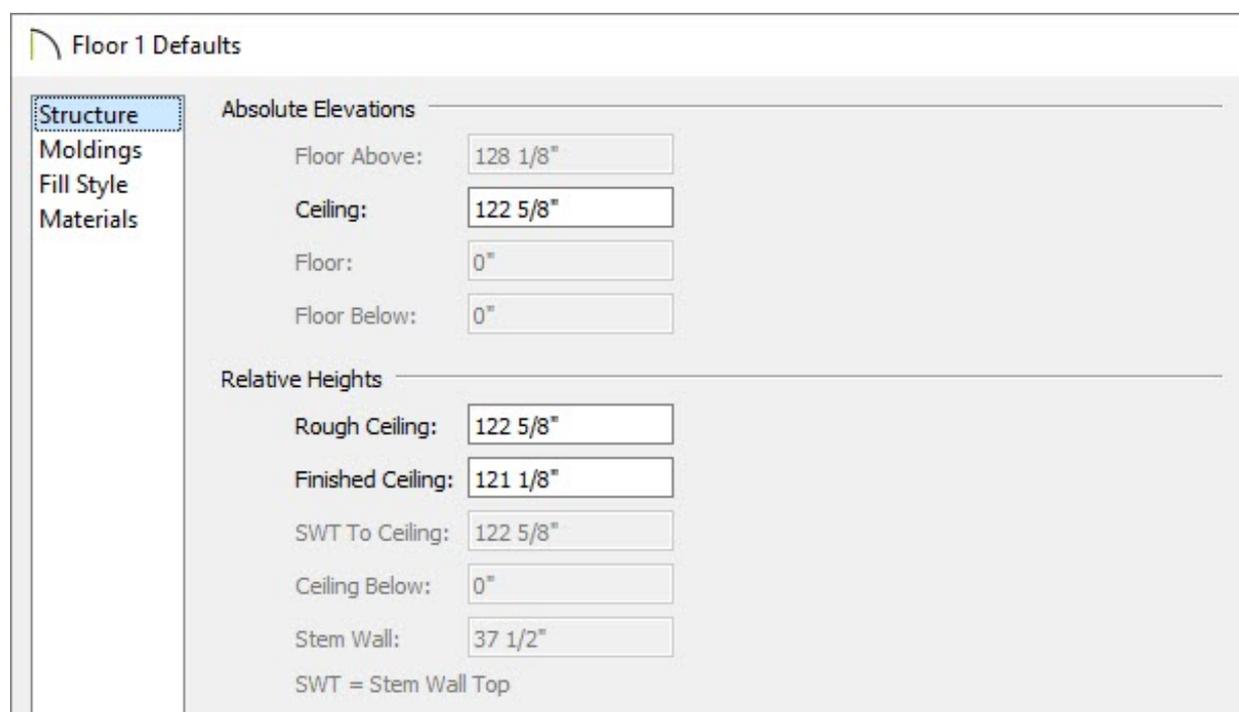
The height that automatic roofs generate at is determined by the ceiling heights within the structure. So, when the ceiling height for an area is adjusted, the automatic roof plane directly over this area will adjust accordingly when the roof is rebuilt.

To control the height of automatic roofs

1. Select **Edit> Default Settings**  from the menu, and in the **Default Settings** dialog, expand **Floors and Rooms**, expand **Floor Levels**, select the floor you'd like to change, and click the **Edit** button.

In X10, navigate to the floor you'd like to change, navigate to Edit> Default Settings, expand Floors and Rooms, select Current Floor, and then click the Edit button.

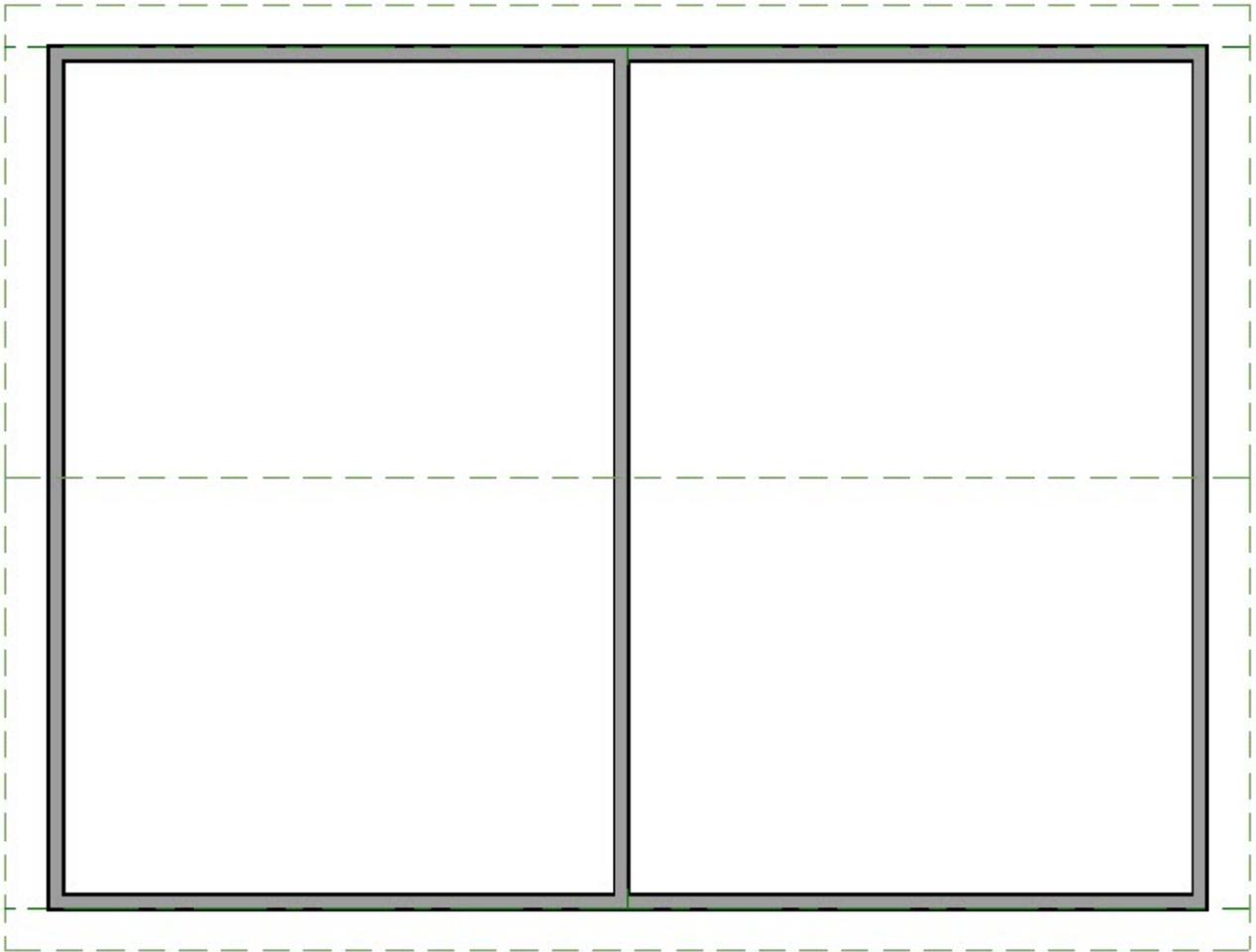
2. In the **Floor Defaults** dialog that displays, change the **Finished Ceiling** to 121 1/8", then click **OK** to close the dialog and apply the change.



Floor 1 Defaults	
Structure	Absolute Elevations
Moldings	Floor Above: 128 1/8"
Fill Style	Ceiling: 122 5/8"
Materials	Floor: 0"
	Floor Below: 0"
	Relative Heights
	Rough Ceiling: 122 5/8"
	Finished Ceiling: 121 1/8"
	SWT To Ceiling: 122 5/8"
	Ceiling Below: 0"
	Stem Wall: 37 1/2"
	SWT = Stem Wall Top

3. If **Auto Rebuild Roofs** is enabled, the roof will automatically update to reflect this change. If Auto Rebuild Roofs is not used, select **Build> Roof> Build Roof**  from the menu, check the box beside **Build Roof Planes**, and click **OK** to rebuild the roof.

4. To see the difference that this change makes on roof height, select **Build> Wall> Straight Exterior Wall**  from the menu, then click and drag to draw a wall perpendicular to the ridge of the roof.

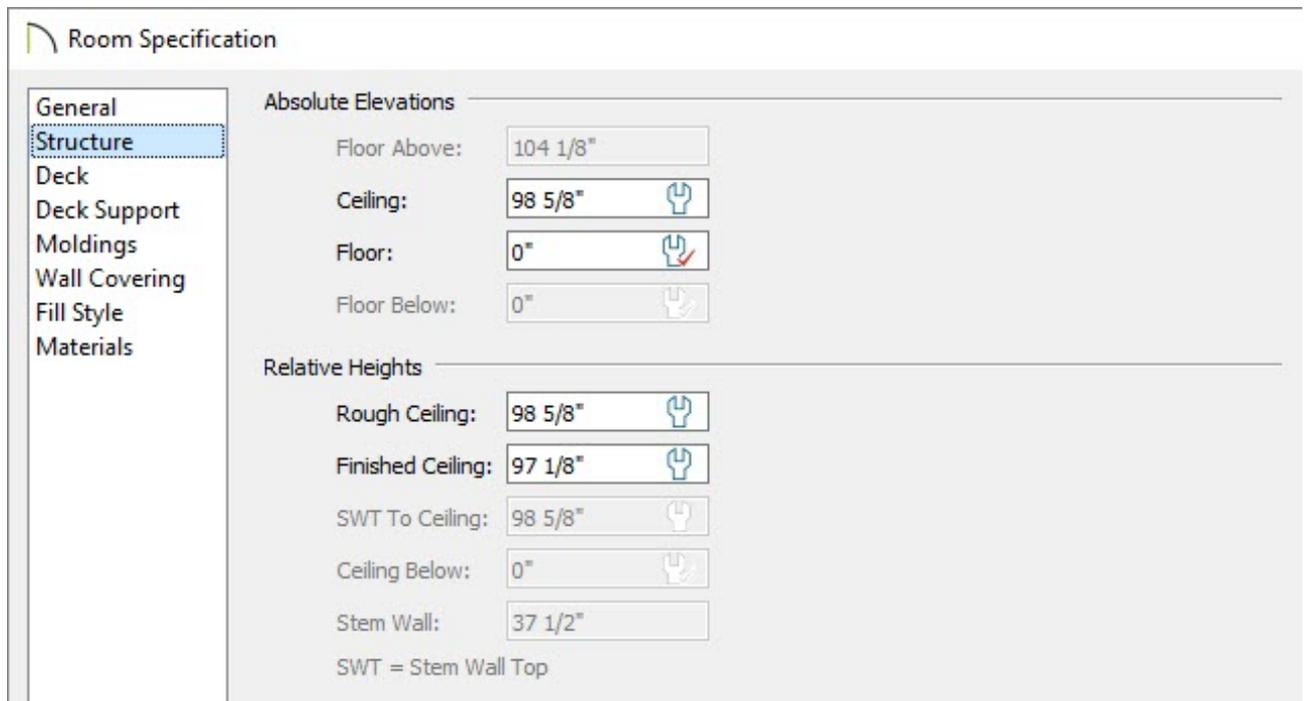


5. Click on this wall to select it and click on the **Open Object**  edit button to open the **Wall Specification** dialog.
- On the **STRUCTURE** panel, check the box beside **Balloon Through Ceiling Above**.
 - On the **ROOF** panel, select the **Full Gable Wall** option, check the box beside **Lower Wall Type if Split by Butting Roof**, and then specify the wall type to be used for the interior wall portion.

In this example, an Interior-6 wall type is specified.

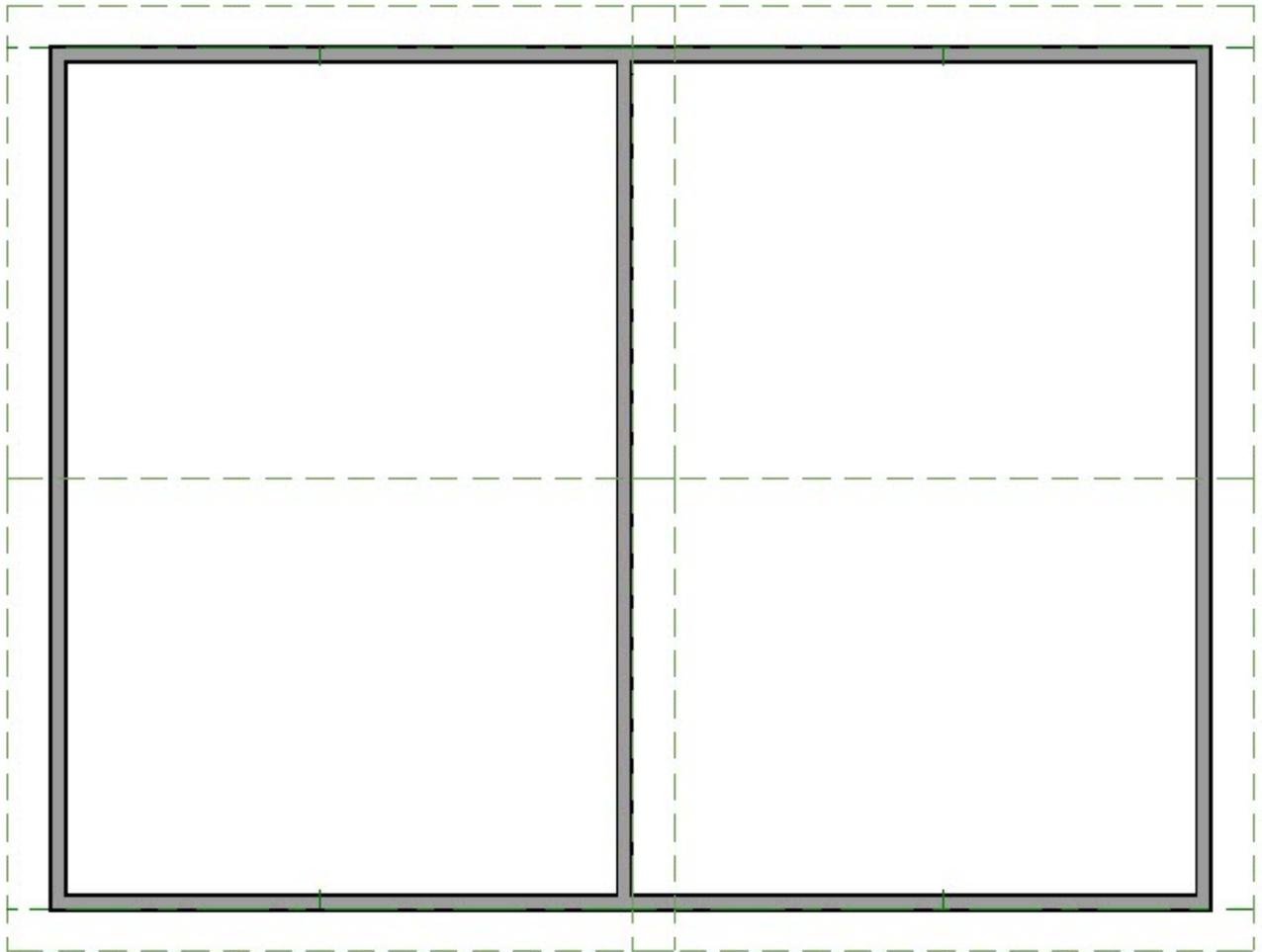
- Click **OK**.

- Click in an empty space in the room on the right to select it, then click the **Open Object**  edit button and on the **STRUCTURE** panel of the **Room Specification** dialog that displays, delete the **Finished Ceiling** value and type in 97 1/8", then click **OK** to close the dialog and apply the change to this room.

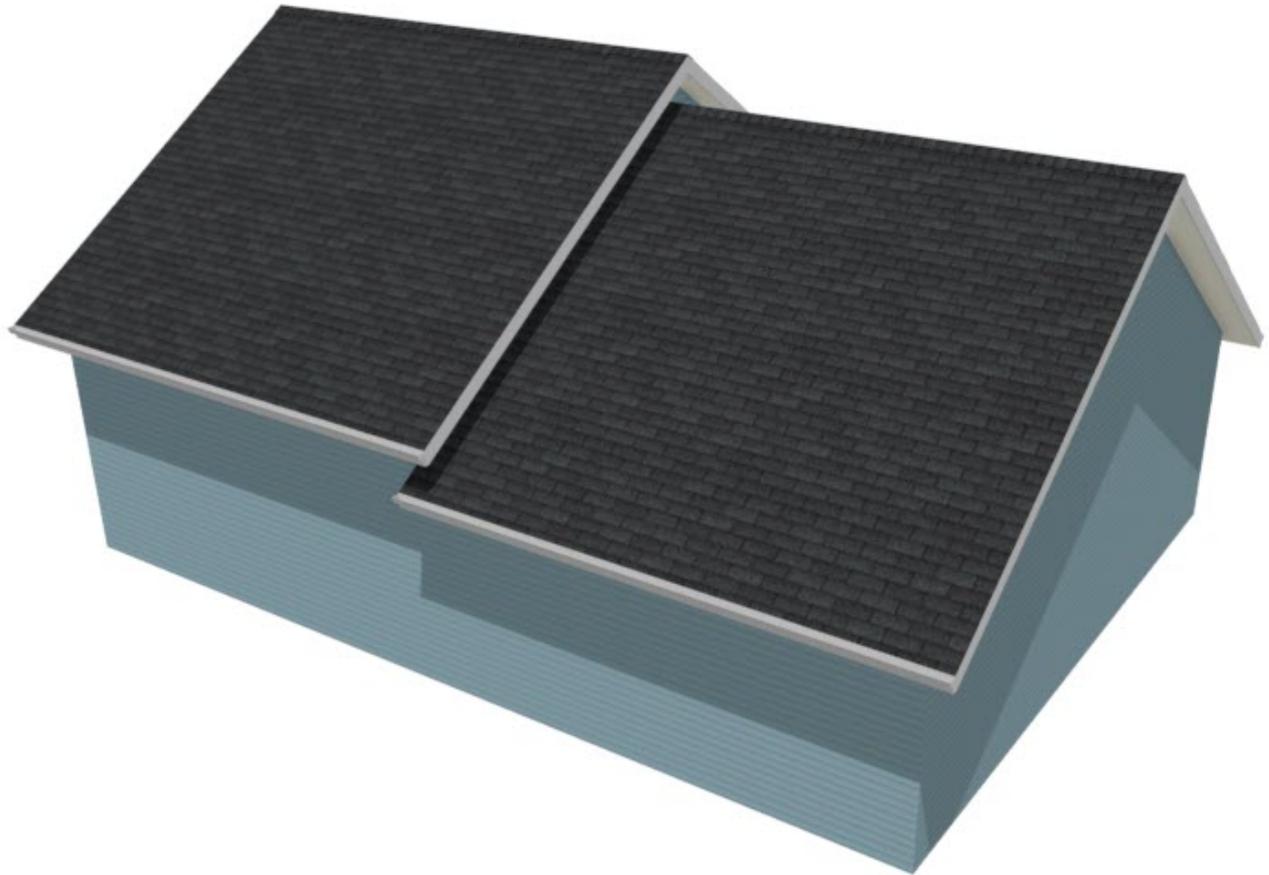


The screenshot shows the 'Room Specification' dialog box with the 'Structure' panel selected. The 'Absolute Elevations' section includes: Floor Above: 104 1/8", Ceiling: 98 5/8" (with a wrench icon), Floor: 0" (with a wrench icon and a red checkmark), and Floor Below: 0" (with a hand icon). The 'Relative Heights' section includes: Rough Ceiling: 98 5/8" (with a wrench icon), Finished Ceiling: 97 1/8" (with a wrench icon), SWT To Ceiling: 98 5/8" (with a wrench icon), Ceiling Below: 0" (with a hand icon), and Stem Wall: 37 1/2". A legend at the bottom indicates 'SWT = Stem Wall Top'.

- If **Auto Rebuild Roofs** is enabled, the roof will automatically update to reflect this change. If Auto Rebuild Roofs is not used, select **Build> Roof> Build Roof**  from the menu, check the box beside **Build Roof Planes**, and click **OK** to rebuild the roof.



8. Select **3D> Create Perspective Camera> Perspective Full Overview**  from the menu to see the results.



It's important to remember that automatic roofs are generated based on the current ceiling heights. If you change the ceiling height after the roof is built, the height of the roof will not be affected until it's rebuilt.

Related Articles

[🏠 Building an 'L' Shaped Structure with Full Gable Ends \(/support/article/KB-00619/building-an-l-shaped-structure-with-full-gable-ends.html\)](/support/article/KB-00619/building-an-l-shaped-structure-with-full-gable-ends.html)